

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 1, lines 4-6 with the following amended paragraph:

BACKGROUND OF THE INVENTION

The invention concerns the field of communication between terminals within a network, and more particularly that of determining data routing paths (or routes) between source and destination terminals.

Please replace the paragraph on page 2, lines 22-23 with the following amended paragraph:

SUMMARY OF THE INVENTION

Thus an object of the invention is to remedy some or all of the drawbacks previously cited.

Please replace the paragraph on page 5, line 22 to page 6, line 4 with the following amended paragraph:

In the method or the device according to the invention, it is preferable if:
any local and/or global constraints are selected from a group comprising at least the minimum bandwidth required, the maximum length of the path, the number of hops on the path, the maximum duration of the path, at least one prohibited link, the maximum number of hops on the path, and a path color restriction. In a network, the color of a link denotes an administrative group assigned by a network administrator, wherein the path color restriction refers to

administrative groups whose member links may or may not be used in the computation of a path.

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~~the~~ The criteria are selected from a group comprising at least the available bandwidth, the number of hops on the path, and the duration of the path; in this case it is even more preferable if the two chosen criteria comprise the available bandwidth and the duration of the path; during step b) (or using the processing means) the criterion relating to the duration of the path is advantageously impacted (or weighted) by a penalty that applies to the administration cost of the path, for example;

the criteria are chosen as a function of the type of service required;

the chosen criteria are weighted as a function of their importance in the light of management information;

any constraints and their associated values are chosen as a function of the quality of service required.

Please replace the paragraph on page 6, lines 6-8 with the following amended paragraph:

BRIEF DESCRIPTION OF THE DRAWINGS

Other features and advantages of the invention will become apparent on reading the following detailed description and examining the appended drawings, in which:

FIG. 1 shows diagrammatically part of a communication network including a multiplicity of nodes equipped with a device in accordance with the invention for calculating routing paths, and

FIG. 2 is a graph showing diagrammatically the method of determining "non-dominated" solutions.

Please replace the paragraph on page 6, lines 14-16 with the following amended paragraph:

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

The appended drawings are essentially of a definitive nature and consequently can serve not only to complete the description of the invention but also contribute to defining it, where appropriate.

Please replace the paragraph on page 8, lines 29-32 with the following amended paragraph:

It may be beneficial to impact (i.e. weight) the criterion C1 (path duration) by a penalty applying to the administration cost CA of the path, for example. The penalty is a quantity based on the administrative cost of a link and serves to raise or lower the performance vector component of the path in relation to the criterion C1, e.g., as a multiplier. Thus a single performance vector component can jointly account for two characteristics of the path, namely duration and administrative cost. This reduces the computation vectors (see below) by one dimension, and consequently limits the computation time and the memory capacity necessary for the computation.

Please replace the paragraph on page 9, line 29 to page 10, line 3 with the following amended paragraph:

In this example, $Z(r^*)$ is a non-dominated solution (NDS), as there is no other point all of whose coordinates are less than those of $Z(r^*)$. Each other point $Z(r)$ has at least one component that is less good than the corresponding component of $Z(r^*)$. In other words, the cone represented in dashed outline and below and to the left of $Z(r^*)$ is empty. In this example, $Z(r')$ is dominated by four points, including $Z(r^*)$, which are within the cone represented in dashed outline and below it, but by the extreme points $Z1(r).sub.min/C1$, associated with $C1$, and $Z2(r).sub.min/C2$, associated with $C2$, which are therefore also non-dominated. Here only $Z(r')$ is a dominated solution. Moreover, $Z(r'')$ is a solution "weakly non-dominated" by $Z(r.sup.o)$ because at least one of the components of $Z(r')$ is equal to (and not less than) its counterpart in $Z(r'')$. Here, a weakly non-dominated solution is a non-dominated solution (NDS) as defined above, which satisfies an additional condition. Namely, the weakly non-dominated solution satisfies that at least one other solution has at least one component equal to and not lower performing than the subject solution.